

## **SECTION 3**

### **GENERAL CONVERTED MTS OPERATING PLAN**

#### **3.1 MTS FACILITY DESCRIPTION**

The City's SWMP proposes the development of four Converted MTSs to provide for containerization and barge or barge-to-rail export of DSNY-managed Waste as a major element of the Long Term Export Program described in Section 2.0 of this application. This section of the Joint Application for Permit provides a general description of the waste processing capacity requirements, design and operation of the four proposed Converted MTSs.

#### **3.2 CONVERTED MTS WASTE PROCESSING CAPACITY**

The Converted MTSs that are elements of the proposed action are:

- North Shore Converted MTS;
- Hamilton Avenue Converted MTS;
- Southwest Brooklyn Converted MTS; and
- East 91<sup>st</sup> Street Converted MTS.

Table 3-1 provides information on the waste flows for DSNY-managed Waste within each of the respective Converted MTS wastesheds that DSNY would expect to process at each of these facilities under various scenarios that are typical of DSNY operations. In addition, the potential maximum daily tons of Commercial Waste that would be delivered by private carters to each facility, consistent with the analysis of off-site impacts in the FEIS, is listed in this table. Finally, the table lists the maximum daily tons used in the analysis of potential off-site traffic, air quality, odor and noise impacts in the FEIS. The table notes, following Table 3-1, provide additional information on the sources, underlying assumptions and application of the data in the table.

**Table 3-1. Converted MTSs DSNY and Commercial Waste  
Anticipated Capacity Requirements and  
Capacities Evaluated in the SWMP FEIS**

Converted MTS Location	DSNY-Managed Waste			Potential Commercial Waste (Noise Constrained) TPD <sup>(4)</sup>	Maximum Daily Capacity Evaluated in FEIS for Off-Site Impacts (tpd) <sup>(5)</sup>
	DSNY Average TPD <sup>(1)</sup>	Average Peak Day TPD <sup>(2)</sup>	DSNY Holiday Week Peak TPD <sup>(3)</sup>		
<b>Hamilton Avenue</b>	1,900	2,280	2,850	1,240	<b>3,520</b>
<b>Southwest Brooklyn</b>	950	1,140	1,425	718	<b>2,106</b>
<b>East 91<sup>st</sup> Street</b>	720	864	1,080	780	<b>1,873</b>
<b>North Shore</b>	2,200	2,640	3,300	1,000	<b>3,672</b>

TPD = tons per day

- (1) The DSNY average ton per day (tpd) values are based upon an analysis of the historical volumes of DSNY-managed Waste generated annually, averaged over 302 days per year in the respective MTS wastesheds.
- (2) The Average Peak Day (tpd) in Column 2 is approximately 20% higher than the Average Day and reflects the daily and seasonal variability in DSNY's weekly collections, as well as the potential growth in waste generated over time, as a function of future population growth.
- (3) DSNY experiences a holiday week collection peak day, Column 3, when a scheduled holiday reduces six days of collection activity to five days. Post-holiday peak day collections can be approximately 50% above the annual average day.
- (4) Column 4 is the quantity of Commercial Waste that could be processed during the 8:00 P.M. to 8:00 A.M. time period without causing off-site noise impacts, based on the environmental review of potentially adverse off-site traffic, air quality and noise impacts reported in the SWMP FEIS. This 8:00 P.M. to 8:00 A.M. time period is the period when commercial carters collect waste in the City and DSNY collection operations are at their lowest volume. Local Law 74 of 2000 directed that DSNY evaluate the potential to process commercial waste at the MTSs.
- (5) The Maximum Daily Tonnage Evaluated in the FEIS for Off-Site Impacts, Column 5, is the sum of data derived from the following sources and methods: (i) as reported in Table 2.1-2, page 11 of the FEIS, a calculated value from a sample of available, historical 1998 data for the Average Peak Day for DSNY-managed Waste in the Converted MTS wastesheds plus a 20% contingency allowance that reflects variations in the waste stream and a margin of conservatism in the analysis of the potential for significant adverse *off-site* impacts related to traffic, air quality, and noise (essentially DSNY collection vehicle traffic to and from the Converted MTS); and (ii) the Commercial Waste Tonnage identified in Column 4. Note that the historical 1998 data for the Average Peak Day for DSNY-managed Waste evaluated in the FEIS exceeds the value listed in Column 2 for the Average Peak Day. The Maximum Peak Day permit limits proposed by DSNY for each MTS, as stated in item #12(b) of the Part 360 Solid Waste Facility Permit application, is less than or equal to the maximum tonnage as noted above that was evaluated in the SWMP FEIS.

A study conducted pursuant to Local Law 74 of 2000 (see Volume III, Commercial Waste Management Study, March 2004) found that available capacity at each of the Converted MTSs (i.e., capacity not required for processing DSNY-managed Waste) could be used to process limited quantities of Commercial Waste without causing potentially significant adverse impacts. The maximum quantities of Putrescible Commercial Waste that could be processed by using this available capacity, updated based on the environmental review in the SWMP FEIS are the quantities listed in the Potential Commercial Waste column in Table 3-1. Subject to economic/institutional arrangements with the private carting industry that cannot be finalized until completion of DSNY's procurement under the MTS Containerization RFP for waste transport and disposal services for containerized waste from the MTSs, Putrescible Commercial Waste would be delivered by licensed private carters to these facilities.

The potential to containerize Commercial Waste<sup>1</sup> at the Converted MTSs was extensively analyzed. In addition to Volume III of the Commercial Waste Management Study referenced above, these analyses included the environmental reviews reported in the SWMP FEIS for each of the MTS sites, prepared to support adoption of the SWMP<sup>2</sup>. These environmental reviews determined that some available capacity in excess of the requirements for DSNY-managed Waste could be used to export Putrescible Commercial Waste from the Converted MTSs by barge and/or rail without causing significant adverse impacts. These analyses were based on following assumptions:

- Recent data on waste generation in the same wastesheds as historically served by the existing MTSs;
- All capacity from 8:00 A.M. to 8:00 P.M. would be reserved for delivery of DSNY-managed Waste;
- Commercial Waste deliveries would occur only from 8:00 P.M. to 8:00 A.M.;
- Commercial collection vehicles would deliver an average of 11 tons per vehicle; and

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<sup>1</sup> Commercial Waste is Putrescible Waste, as defined in DSNY Rules, collected by the City's licensed private caters from business establishments in the City.

<sup>2</sup> See section 7.18 of the FEIS.

- Commercial Waste deliveries would not exceed the hourly waste processing capacity of each Converted MTS; therefore, Commercial Waste would not be stockpiled at the Converted MTSs.

Based on the above analyses and assumptions, the maximum daily tonnage of Commercial Waste that could be processed is shown in Table 3-1 in the column Potential Commercial Waste.

The basis of design for the proposed MTS considered hourly and daily peak arrival rates for DSNY collection vehicles and tons of DSNY-managed Waste. The hourly throughput rate was established to ensure that the MTS could process anticipated peak hour deliveries of DSNY-managed Waste. This peak arrival rate for DSNY collection vehicles occurs during the second shift, typically for one hour between the hours of 8:00 A.M. to 12:00 P.M. Given on-floor storage capacity, the number of tipping bays and on-site truck queuing space on the ramps, this arrival can be accommodated without any off-site queuing. DSNY has proposed Weekly and Maximum Peak Day permit limits in the Part 360 Permit application that are based on DSNY's recent data on the generation of DSNY-managed Waste in the former MTS wastesheds and the FEIS analysis of potentially significant adverse off-site noise impacts from the routing of commercial collection vehicles to the MTSs during the 8:00 PM to 8:00 AM period. These limits are less than or equal to the waste volumes evaluated in the FEIS that were shown to have no potentially significant adverse impacts.

These limits are below the nominal hourly and daily design capacity of the MTSs defined by the following assumptions:

- The MTS would process 10 containers per hour using three loading slots with the fourth maintained in a spare mode.
- The loader level would be kept as clear of waste as possible during processing hours by loading all waste received into containers as soon as possible and keeping stockpiles at a minimum.
- Each container would be loaded with approximately 20 to 22 tons of waste.
- Each barge would be loaded with 48 containers of waste.
- Barge switches would not interrupt waste processing operations.

- Employees would effectively work 6.5 hours out of an 8-hour shift due to shift changes and break time during the shift, resulting in 19.5 operating hours per 24-hour day.

Using these parameters, hourly throughput approximates 220 tons and the average nominal design capacity is 4,290 tpd (220 tons per hour x 19.5 hours per day) for the four Converted MTSs. Design capacity should not be interpreted as proposed permitted capacity.

### **3.3 MTS OPERATIONS - GENERAL**

The four Converted MTS facilities would have a common three-level processing building design, which is discussed in greater detail within Section 4. Plan and section views of the individual facilities are also provided within Section 4. These proposed facilities would have the following operational features:

- Collection vehicles would enter an elevated tipping floor at the uppermost level and tip waste onto the second-level loading floor, at an elevation 12 feet below;
- On the loading floor, loaders would either; push the waste into loading slots located over open-top containers located on the indoor pier level, at an elevation 16 feet below; or push the waste into storage piles.
- Excavators operating over the loading slots in the loading floor would even and tamp the waste in the containers, which would then be transported by a shuttle car system to an enclosed lidding/delidding area within the building and lidded with leakproof, gasket-sealed covers and moved to the external pier level of the facility;
- A gantry crane on the pier would load full containers onto and unload empty containers off of a flat deck barge moored to the pier;
- Each barge would have a capacity for 48 containers; and

- Tugboats would move full/empty barges directly to an out-of-City disposal site<sup>3</sup> or between the MTS and an intermodal transloading facility where they would be loaded onto railcars or a larger barge for transport to a disposal facility.

In general, to enter the MTS, waste collection vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building at the entrance to the tipping floor level, with the exception of the Hamilton Avenue Converted MTS, where the scale would be located outside of the building just before the entrance to the tipping floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale located at the bottom of the ramp.

The loading floor would be located 12 feet below the tipping floor. On the loading floor, front-end loaders would either push the waste into loading slots located over open-top containers, or into storage piles. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, located 16 feet below the loading floor. While a container beneath the slot is being filled, an excavator would tamp down the waste in the container to compress it. An onboard scale located on the container transport system would be used to determine the weight of the waste, and this weight would be displayed above each slot on the loading floor to notify the loader and tamper operators when the container is full. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasket-sealed steel lid via pressure from a lidding hoist fitted with a spreader device. Then, the rapid opening/closing rollup door to the lidding area would open, and the sealed containers would move via the shuttle cars onto the outdoor pier level. Once the shuttle car is on the pier level, the rollup door would immediately close. Gantry cranes located on the pier would be used to load the full containers onto flat deck barges moored to the pier, as well as load empty containers onto the shuttle cars. The barges, with the capacity to hold 48 containers and a containerized waste net payload of approximately

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<sup>3</sup> The procurement of transport and disposal arrangements whereby private companies would service the Converted MTSs was the subject of a DSNY Request for Proposals to Transport and Dispose of Containerized Waste from the Converted MTSs (MTS RFP). DSNY has completed an evaluation of these proposals but definitive contractual arrangements for transport and disposal services have not been negotiated.

1,056 tons, would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal sites.

The intermodal containers would have exterior dimensions of approximately 20 feet long by 12 feet high by 8½ feet wide. They would be capable of holding approximately 62 cubic yards of refuse. The containers would hold a net payload of up to 22 tons. The containers, similar to those currently used in intermodal waste hauling operations and fabricated to American Bureau of Shipping (ABS) standards, would be leakproof and watertight with a gasket-sealed lid that is locked in place. The design of the containers would enable them to be lifted using standard spreader assemblies.

Subject to the outcome of negotiations between DSNY and the proposers selected pursuant to the MTS Containerization Request for Proposals (MTS RFP), containerized waste would be transported by barge from the Converted MTSs directly to: (i) a disposal site; or (ii) intermodal terminals in the New York Harbor region, where the containers would be transloaded to railcars or a larger barge for transport to an out-of City disposal facility.

Barges would be brought to the each MTS via a tugboat service. Barges would be moored along the designated mooring berths. Prior to barge maneuvering, both container gantry cranes would be parked at the shore end of the pier, away from the maneuvering area. Once the barge is loaded and the second barge is needed at the pier, maneuvering would be accomplished utilizing electric capstans and mooring fittings strategically positioned on the pier. Barges would be moored with wire rope bow and stern lines from constant tension winches to reduce line handling that may be required during draft and tidal changes.

Once a barge is fully loaded, the barge would be moved clear of the pier container loading area to make way for movement of the next barge to the crane loading area. After a barge is fully loaded, a tugboat would bring a new barge full of empty containers to the MTS for drop-off and then pick-up the fully loaded barge for transport to either a disposal site, or to an intermodal terminal.